# Mulcahy Dental Practice

The ERD consists of seven entities, which correspond to the tables in the database. It shows the relationships between the tables.

The database consists of seven tables: appointments, bill, patient, payment, referrals, specialist, and treatment.

The ‘appointments’ table consists of seven. Each row shows a different appointment (past and future) through ‘appointmentNumber’, this is the primary key. The ‘appointmentDate’ column shows the date of the appointment. The ‘appointmentTime’ ahows the time of the appointment, and the ‘patientNumber’ column tells you which patient has made the appointment, this is a foreign key. The ‘reminded’ column is used to show if the patient has been sent a reminder for their appointment. This table also has the ‘appointmentCancelDate’ and the ‘lateCancelation’ columns. These are used when the patient makes a cancellation. The ‘appointmentCancelDate’ columnis used for inputting the date the appointment was cancelled on, if the cancelation is late the ‘lateCancelation’ column is marked ‘YES’, otherwise it is marked ‘NO’. Both cancel columns, if a patient has not cancelled their appointment, remain NULL.

The ‘bill’ table is populated with five attributes. The ‘billNumber’ is a unique identifier for each bill, it is the primary key. ‘billDate’ shows the date the bill was issued. ‘patientNumber’ is a foreign key, associates the bill to the corresponding patient. ‘appointmentNumber’ shows the appointment identifier - when the treatment was received, this is a foreign key. ‘treatmentName’ shows which treatment was received also a foreign key.

The ‘patient’ table contains contact information regarding each patient. ‘patientNumber’ is the table’s primary key. patientFirstName, patientLastName, patientDOB, patientPhone,, patientEircode and patientEmail all hold information used to contact a patient. ‘patientBalance’ shows how much a patient owes for previous treatments/appointments. This is found by subtracting payments from the bill.

The ‘payment’ table keeps a record of payments made by the patients. Including date of payment, the ‘paymentNumber’ (primary key), the ‘patientNumbe’r (foreign key), the paymentMethod, ‘paymentAmount’, ‘billNumber’ which the payment is for (foreign key), and the ‘billBalance’ which shows the amount which still needs to be paid by the patient.

The referrals table shows all referrals to specialists. Each referral has a ‘referralNumber’, this is the primary key. This table consists of ‘patientNumber’, ‘specialistNumber’ and, ‘appointementNumber’,

all foreign keys. These keeps track of which patient is getting referred to which specialist and during which appointment the referral occurred in.

The specialist table is a list of specialists to be used for patient referrals. Each row consists of the primary key, ‘specialistNumber’; and the relevant contact information for each specialist: name, speciality, phone number, address, and referral email.

The last table is the treatment table which has two columns: ‘treatmentName’ and ‘treatmentCost’. These show the name of each treatment and their cost. ‘treatmentName’ is the primary key.

This database also consists of four views. The first is the ‘nextweek_appointments’ view. This is used to show the list of patients who have appointments scheduled for the following week.

The ‘highrepayment’ view. This shows patients who have accumulated high bills which have not been paid yet; these patients will be unable to make new appointments until payments due are made.

The ‘latecancelation’ view shows which patients have cancelled an appointment on short notice and thus are subject to a fee of €10.

Finally, the ‘laterepayment’ view shows which patients are late in repaying a bill. If a user appears in here they won’t receive a new appointment until ‘patientBalance’ is ‘0.